**Unit of Study**: Plants 

Originally from: *Sprouting: How to Grow Sprouts at Home for Low Cost Nutritious Meals* By: [Derek Markham](http://naturalpapa.com/author/admin/)

**Activity**: Plants We Eat: Making Sprouts

**Materials**:

* prepared chart of Parts of Plants We Eat (see attached)/markers
* glass mason jar for each table (group of students)
* cheese cloth (or fine nylon netting, clean stockings or other fine straining material)
* rubber bands
* seeds for sprouting: common choices are mung beans, alfalfa seeds, soy beans and chick peas. You can also use adzuki beans, amaranth, cilantro seeds, dill, celery, canola seed, and many others. [You might want to use different seeds for different tables, or mix them to see what happens.]
* paper plates or bowls for seeds
* 1 cup of fresh water for each table
* a cupboard or corner of your classroom out of direct sunlight
* 5 to 10 minutes each day to care for your sprouts
* sequencing cards showing each step to support struggling learners

**Preparation**:

* Gather materials for each table:
  + one glass mason jar
  + cheese cloth
  + rubber bands
  + seeds
  + paper plate/s as needed
  + 1 cup of fresh water
* Prepare chart with blank spaces for students to fill in, of Parts of Plants We Eat (see small chart attached)

**Summary of Activity**: Students will prepare seeds for sprouting.

**Flow of Activity**:

1. Introductory discussion on rug
   1. Create chart of plants we eat, using categories of parts of the plant (roots, stems, leaves, flower, fruit, seeds) [Use book I wrote, ***We Eat Plants!***]
   2. Ask if anyone has ever eaten seeds and tell students that today we are going to make sprouts for a salad
2. Students go back to seats
3. Students follow simple directions, which the teacher will demonstrate, to:
   1. Place seeds in jar
   2. Pour water into jar
   3. Wait about 5 minutes, then skim off any particles that may be floating (Any seeds that float are not viable.)
   4. Cover jar with double cheese cloth, using rubber band to fasten tightly around top of jar
   5. Spill water out in sink through cheese cloth to make sure seeds are clean
   6. Wash seeds again and soak overnight (6-8 hours), then
   7. Drain water completely, leave for 8-12 hours
   8. Rinse seeds through cheese cloth, draining water completely
   9. Repeat steps g. and h. until sprouts are ready (a few days)\*
   10. Create a salad with other vegetables (cucumber, lettuce, tomato…)

\* Sprouts will be ready as soon as they have a “tail”

**Class Time Required to Complete Activity**: about 45 minutes the first day, then about 10 minutes each day until sprouts are ready (a few days—see above)

**Best Time of Year to Conduct Activity**: Spring, as weather will cooperate and classroom heat no longer an issue.

**Content Outcome**: Students will be able to identify parts of plants they can eat, and will be able to make a salad when sprouts are ready.

**Skill Outcome**: Students will be able to follow directions to conduct an experiment, using tools: jar, cheese cloth, rubber band.

**Scope & Sequence/CORE achieved by this activity**:

LE 3.1b Identify and compare the physical structures of a variety of plant parts (seeds, leaves, stems, flowers, roots).

LE 1.1b, LE 1.2a, LE 4.2a, LE 5.1a Identify the basic needs of organisms to live3 and thrive:

• Needs of plants to live and thrive (e.g., air, water, light)

• Living things grow and change.

**Assessment of Learning**:

* **Content Outcome**: Teacher observation of *what* students state/draw about what they’ve observed and donewith the seeds. Full explanation plus predictions for other sprouts would be a 4, naming parts and sequencing pictures to help explain process would be a 3, etc…
* **Skill Outcome**: Teacher observation of *how* students were able to conduct the experiment over time.

**This activity can be enhanced with the following connections**:

* If you want to prepare seeds for planting, follow the following schedule:
* Soaking times and amounts of seeds for sprouting in a quart jar:
* Alfalfa seeds: Soak 2 Tbs for 4 to 8 hours
* Clover seeds: Soak 2 Tbs for 4 to 8 hours
* Broccoli seeds: Soak 2 Tbs for 8 to 12 hours
* Whole lentils: Soak 1 cup for 8 to 12 hours, then eat
* Fenugreek seeds: Soak 1/4 cup for 4 to 8 hours
* Radish seeds: Soak 3 Tbs for 4 to 8 hours
* Raw hulled sunflower seeds: Soak 1 cup for 6 to 8 hours, then eat
* Chia seeds: Soak 1 cup for 6 to 8 hours, then drain and eat
* Sesame seeds: Soak 1 cup for 6 to 8 hours, then eat
* [Wheat berries](http://naturalpapa.com/food/sprouting/sprouting-wheat-berries-oat-groats/" \t "_blank): Soak 1 cup whole wheat berries for 8 to 12 hours
* Rye berries: Soak 1 cup whole rye berries for 8 to 12 hours
* Larger beans will take a few days